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ABSTRACT

A survey containing open-ended questions about class size was distributed to teachers in five schools (3 elementary and 2 secondary) in a rural school district in south China. Responses were received from 55 of 100 teachers surveyed; all had 5 or more years of teaching experience. A class of 50 or more students was considered large, while one with 30 or fewer students was considered small. Virtually all of the teachers preferred smaller classes, but did not regard them as necessarily related to student achievement. Smaller classes were seen as being easier to manage, allowing individualized help to students, facilitating teaching effectiveness, and requiring less work by teachers. The teachers considered outside influences of society and home, as well as the learning atmosphere of school and class, to be important factors in learning outcomes. The teachers tended to encourage competition among students and to create competitive class activities, which they believed facilitate achievement. However, they also believed that peer help was important for student success in large classes. Contains 20 references and an English translation of the questionnaire. (SV)

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The Functions of Class Size Perceived by Chinese Rural School Teachers

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Abstract

A random survey with open-ended questions was conducted on a sample of Chinese rural teachers (N=55). The study investigated issues related to functions and benefits of small classes to both teachers and students. Findings indicated that the Chinese rural teachers perceived class size as a beneficial factor, not directly related to student achievement. They believed that small classes in schools facilitate classroom management, more individualized help from teachers, teaching effectiveness, a better learning atmosphere, more student-teacher interactions, and reduce teachers' workload. They also believed in teachers creating and encouraging competition and peer help among students, which they regarded as important for students in large classes to learn better. Some cultural differences were also found.

The Functions of Class Size Perceived by Chinese Rural School Teachers

The search for the best educational environment, particularly for small size classes, has been an important educational issue for educators, administrators, parents and government officials. Parents and educators believe that small class size leads to more effective teaching and improves student achievements (Achilles, 1997; Costello, 1992; Johnston, 1989). Bracey (1995) observes: Test scores rise when districts use money to reduce class size and hire experienced teachers. While most students prefer small classes, teachers believe that quality teaching is also possible in large classes (Litke, 1995).

Research literature provides mixed evidence on the benefits of small size class. Nelson and Drake (1997) reported that small size classes in rural schools provided an ideal environment for teacher-student interaction. Teachers in British elementary schools were found to have interacted more with students when they worked in smaller classes (Hargreaves, Galton & Pell, 1997). In the special education field, smaller classes provided better environments for learning at the elementary level (McCrea, 1996).

In a study to determine the effect of small class size on reading achievement of first grade students, 88 students were instructed either in a small class (N=17) or a large class (N=27). Results indicated that students in small classes made greater gains compared to those in large classes (Costello, 1992). In math learning, high school and college students in

small classes were found to have performed better in long term retention (Urion & Davidson, 1992). Similarly, Boozer and Rouse (1995) reported that smaller classes at the 8th grade led to larger test score gains from 8th to 10th grade, and that differences in class size could explain approximately 15 percent of the black-white difference in educational achievement.

A large-scale, 4-year longitudinal and experimental research project on class size (Project Student Teacher Achievement Ratio --STAR) was conducted in Tennessee. In 1985, approximately 7,000 kindergarten students were randomly assigned to either small classes (N=15), or regular-sized classes (N=24) with a full time aide. It was found that the small classes had the highest student test outcomes; however, small class intervention did not remedy already-defined test-score deficits after students had experienced regular classes (Achilles, 1993). With the same STAR project, small classes beginning in primary grades seemed to prevent later school problems; however, late application of small class treatment appeared to have limited value (Achilles, Nye, Zaharias, Fulton & Cain, 1996). Other related studies showed that small class students from Project STAR scored significantly higher than regular-sized class students on all achievement measures (Folger & Breda, 1989; Nye et al, 1992).

A follow-up study on fourth graders from Project STAR showed significant small class carry-over effects on every achievement measure and significant participation differences in small class students (Finn, Fulton, Zaharias & Nye, 1989). With respect to

lasting effect, Achilles, Nye, Zaharias and Fulton (1993) reported that students who were in STAR small classes at least in grade 3 were statistically and educationally ahead of other STAR students. Based on a reanalysis of STAR test data, Bingham (1994) noted that small size class appeared to make a bigger difference for minority students than for white students in primary years.

An evaluation study on the Nevada small class program indicated mixed effects of lower student-teacher ratios: Short-term success was reflected in higher reading and math scores. However, special education status, ethnicity, free-lunch eligibility, class configuration, etc. were considered more important factors than class size in predicting a student's CTBS score. Although a portion of the differences between student scores were explained by class size and student characteristics, approximately 90% of the differences were unexplained by the data (Nevada State Department of Education, 1995).

The literature provides inconclusive findings on the effect/impact of class size. In what aspects small classes help teachers and students remains to be further investigated. This study was designed to investigate: 1) What kind of factor is class size? 2) What are the benefits for having small classes in schools? 3) What should teachers and students in large classes do to teach and learn effectively?

Method

A random survey was conducted in a southern Chinese rural school district (a county system, with 132 schools and 41,200

students). It is regarded as a rural school district because over 90% of the county population are in agricultural business. Generally, in this district, according to local educational administrators, a class with 50 or more students was considered "large," a class with 30 or fewer a small class. The average class size of the schools was a class with 48 students. However, classes in elementary schools were relatively larger than those in secondary schools.

Participants

The participating teachers were full-time teachers in those schools. They had five or more years of teaching experience.

Design and Procedure

From a list of 20 schools located within five miles of the county's main town, 5 schools (3 elementary and 2 secondary schools) were sampled for the project. The first school of every four was selected this way. The reason for selecting among schools located within five miles of its main town was that it took less time for one to get to those schools by bike. All these schools were ordinary schools, not different from other schools in the county, according to a school district official.

A survey package (with an anonymous questionnaire and an introduction letter explaining the purpose of the study) was stuffed in an unsealed envelope. A big manila envelope stuffed with 20 such packages was delivered by a project assistant to each of the five school principals. In a separate letter, the principals were requested to distribute the survey packages to

his/her teachers with five or more years of teaching experience. In total, one hundred surveys were sent out this way. Approximately 50% of the teachers in each school were surveyed. In addition, the participating teachers were requested in the introduction letter to return the answered questionnaire in a sealed envelope to their principal. The project assistant went to the principals and collected the data two weeks thereafter.

Instrument

A survey questionnaire was developed based on the research questions. Basically, the questions were open-ended. The questions were designed to collect the perceptions of the Chinese rural teachers on class size related issues (see Appendix).

Results

Out of 100 surveys sent out, 55 were returned. The return rate was 55%. The following is a summary of the findings.

In response to Question 1, the majority of these teachers considered a class with 45 to 50 students a small class, a class with 50 or more students a large class. In terms of what size of class they preferred to teach, 54 of the 55 teachers responded with "Small class." One responded: It does not matter to me.

The findings listed in Table 1 provides information on only the five factors identified by the highest percentage of teachers in their responses to each question. The number of factors they actually identified to each question exceeded five factors. See Table 1.

Table 1 Chinese Rural Teachers' Responses on Class Size Related Issues (N=55)

Questions	Factors Identified by Highest % of Teachers*	% Responded
2	Student quality (intelligence, motivation, etc)	62
	Teacher quality (knowledge, dedication, hard-working, teaching quality)	56
	Student effort	36
	Learning environment (social influence, school & classroom learning atmosphere)	31
	Teacher's attitude toward students	20
3	Big class being a negative factor/small class being a beneficial factor	87
	Class size being an unrelated factor	7
	Small class having positive and negative factors	4
	Preferring a class size of 30 students	2
4	Facilitates classroom management	49
	Facilitates appropriate/individualized help	49
	Facilitates teaching effectiveness/less work	29
	Helps to produce better student achievement	9
	Helps teachers to get to know students better	7
5	Facilitates a better learning atmosphere	24
	Generates fewer disciplinary problems	16
	Facilitates more student-teacher interactions	15
	Facilitates more teacher-guided practice	11
	Facilitates better instructional outcome	7
6	Being more motivated	29
	More peer help	18
	Working harder/making more effort	15
	Obeying discipline/rules	15
	Being more competitive	9
7	Better guidance work by teachers	31
	Enforce discipline	20
	Carefully prepare and deliver instructions	15
	Better classroom management	13
	Organize various competitive activities	11
8	A positive learning atmosphere	25
	Strong competitive spirit among students	13
	Technology use in education	9
	Establish strict rules	9
	Positive home influence	7

* Factors identified by smaller % of teachers not included.

Discussion

The findings show that in terms what size of class is considered "large or small", there seems to be a cultural difference here, on which American educators have a different standard. Nevertheless, it appears that most of the Chinese rural teachers prefer to teach smaller classes.

The main benefits of teaching smaller classes identified by the Chinese rural teachers were: Small classes are easier to manage, easier for teachers to provide individualized help to students; they facilitate teaching effectiveness, and mean less work for teachers, etc. Even though no direct causal relationship between class size and student achievement was identified by the teachers, these seem to be sufficient reasons for any teacher to prefer to teach small classes. After all, small classes benefit the teaching and learning process and teachers' work-fare, which warrants support from all educators.

Societal/home influence, school and classroom learning atmosphere were identified as important factors to learning outcomes by the Chinese rural educators. In other words, they regard these outside (outside of school) influences and learning atmosphere as important factors that are related to student achievement. On this issue, they agree with American educators. Perhaps they rank these factors more important than we do.

As the data indicate, the Chinese rural teachers tend to encourage competition among students and create competitive class activities, which they believe facilitate

better student achievement. In the meantime, they also believe that peer help is also an important factor for students' success in large classes. American educators seem to be shy from promoting competition among students while encouraging peer help among students. This cultural difference warrants us to rethink about our beliefs on competition among students and conduct research on this issue.

One reason for a 55% return rate is that some Chinese rural teachers are still afraid to be somewhat related to an American educator. As one teacher expressed: I do not want to be in trouble later. Approximately 20 years ago, it was considered dangerous by the Chinese people to have anything to do with a foreigner.

Conclusion

The findings of the study indicated that the Chinese rural teachers did not see a necessary link between class size and student achievement. However, they believed that small classes facilitate classroom management, more student-teacher interactions, more individualized help from the teachers, and reduce teachers' workload. In other words, small classes facilitate the teaching and learning process and reduce teachers' workload. The Chinese rural teachers also believed that competition among students promote learning for students in large classes.

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Appendix

Questionnaire
(Translation of a Chinese Version)

Please briefly answer the following questions. (You may write on the other side of the questionnaire.)

1. If you have a choice, what would you prefer to teach: Small classes or large classes?

2. In your opinion, what are the main factors that determine students' achievement?

3. Is class size a main factor that is closely related to student achievement, or is it merely a beneficial factor?

4. In your opinion, <u>To Teachers</u>, what are the benefits of teaching small classes?

5. In your opinion, <u>To Students</u>, what are the benefits of studying in small classes?

6. What should students in large classes do in order to achieve better?

7. What should teachers do in order to provide a quality education to students in large classes?

8. Please identify other factors that facilitates students' learning quality.

Thank you very much for your time and help!